INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

11 April 2024 (am)

Subject CP1 – Actuarial Practice
Core Principles

Paper One

Time allowed: Three hours and twenty minutes

In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator.

If you encounter any issues during the examination please contact the Assessment Team on T. 0044 (0) 1865 268 873.

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1 An insurance company sells a wide range of business, and is pricing a new version of its income protection insurance product.

Describe how the company's expenses may be allocated when pricing this new product. [6]

2 An insurance company writes motor insurance business.

(i) List the items the insurance company will request from a customer in order to price motor insurance business. [3]

The marketing department has suggested offering a new 'multicar' option. This would allow a policyholder who takes out a policy to insure one car, an option to insure (at the same time) additional cars in their household at the same premium rate as the first car.

(ii) Outline the risks to the company of allowing this option. [3]

(iii) Outline how the option could be adjusted to mitigate the risks identified in part (ii). [3]

[Total 9]

3 Five years ago, a bank started selling a new product that was unique in the market. This product now accounts for over half of the bank's new business. The model used to price the product has been the same since the product was launched.

A significant error has just been identified in the model.

(i) Set out the steps the bank should now take. [5]

(ii) Suggest reasons why the error may not have been identified until now. [4]

[Total 9]

4 A medium-sized financial company, operating in a particular country, has put itself up for sale.

The company currently sells a range of protection and savings products. It also has a range of business still in force but no longer being sold, including a number of unique products sold only in that country.

A group of overseas investors, who have previously owned similar financial companies in other countries, have decided to bid for the company.

(i) Discuss why the group may be at a disadvantage bidding for the company, relative to domestic investors. [4]

(ii) Discuss, with reasons, the risk governance reviews that the successful bidder would undertake following the purchase of the company. [4]

[Total 8]

5 A defined benefits scheme undertakes an annual valuation. The scheme's actuary wishes to analyse the change in surplus from one year to the next.

(i) Suggest possible reasons why the actuary would want to perform this analysis. [3]

(ii) Describe how the actuary could analyse the performance, over a 1-year period, of an investment fund manager against the benchmark investment return. [3]

The results of the latest valuation for the scheme show a surplus.

(iii) Discuss the options available to the scheme for the distribution of this surplus. [3]

[Total 9]

6 A health and care insurance company is redesigning its sales process for launching new products. As part of the redesign, the company will make underwriting questions and policy wordings clearer.

(i) Explain why the insurance company will regularly review its sales process. [3]

(ii) Outline the information that the insurance company could use in redesigning its sales process. [4]

(iii) Suggest why a regulator may require insurance companies to regularly review their sales process. [2]

[Total 9]

7 A general insurance company writes property insurance in a particular country. The company has been experiencing financial difficulties, which have led to intervention by the regulator.

(i) Suggest reasons that may have led to the company's financial difficulties. [4]

(ii) Describe the actions the regulator may have taken while the company was under its supervision. [4]

One year later, the company has been declared insolvent.

(iii) Outline what may happen to any policies still in force at the time of the insolvency. [3]

[Total 11]

8 (i) Outline the main information asymmetries that may arise in:

(a) immediate annuity business.

(b) car insurance business.

(c) derivative contracts, sold by a very large bank to airlines that want to hedge key risks such as currency and fuel prices.

[6]

(ii) Discuss why it is important for a regulatory regime to include requirements to treat the customer fairly. [6]

[Total 12]

9 In a certain country, the insurance market is just beginning. One private insurance company is being allowed to offer a range of insurance products and a regulator for the market is in place.

The regulator has asked the company to propose best estimate pricing assumptions (other than investment return).

The regulator has specified two requirements for companies when setting best estimate pricing assumptions, which are:

- the company must use experience data for this purpose
- experience data must be obtained from overseas.

(i) Outline the basic requirements of experience data to be used for setting best estimate pricing assumptions (other than investment return). [4]

(ii) Describe, for each of the following insurance products, the problems that may arise from the regulator's two specified requirements when setting best estimate pricing assumptions (other than investment return):

(a) term assurance

(b) income protection insurance

(c) home buildings and contents insurance.

[9]

[Total 13]

10 A life insurance company offers a wide range of products. The company has decided to sell a new whole of life product aimed at consumers on low incomes. The sum assured on this product will be much lower than that on its standard whole of life business.

(i) Suggest possible reasons why the company has decided to offer this new product. [4]

(ii) Discuss the factors the company will need to consider in designing this new product. [6]

(iii) Suggest two possible alternative products, to provide benefits on death, which may be suitable for consumers on low incomes. [1]

(iv) Compare the suitability of the products suggested in part (iii), compared with the proposed new whole of life product. [3]

[Total 14]

END OF PAPER